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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/985,927	11/06/2001	Naoki Shibata	P 280416 T36-140921M/KOH	4555

909 7590 06/14/2002
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EXAMINER

SEFER, AHMED N

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 06/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/985,927

Applicant(s)

SHIBATA ET AL.

Examiner

A. Sefer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2001.
- 2a) ☐ This action is FINAL.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Tadatomo et al. (JP 7-273367).

Tadatomo et al. disclose in figs. 1-3 a group III nitride compound semiconductor device comprising a substrate on which a first environment division and a second environment division are formed; and a group III nitride compound semiconductor layers 4 formed on said first environment division so as to serve as effective semiconductor layers.

As to claim 6, Tadatomo et al. disclose in fig. 2 a first environment division which is in a state in which a surface of said substrate is exposed before said group III nitride compound semiconductor layers are formed.

As to claim 7, Tadatomo et al. disclose a second environment division made of a material which prevents said group III nitride compound semiconductors from being grown on said material.

3. Claims 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada et al. (JP 7-169715).

Yamada et al. disclose in figs. 1-5 a group III nitride compound semiconductor device comprising a substrate 1 on which a first environment division (unnumbered) and a second environment division 11 are formed; and a group III nitride compound semiconductor layers 2 formed on said first environment division so as to serve as effective semiconductor layers.

As to claim 6, Yamada et al. disclose a first environment division which is in a state in which a surface of said substrate is exposed before said group III nitride compound semiconductor layers are formed.

As to claim 7, Yamada et al. disclose a second environment division made of a material which prevents said group III nitride compound semiconductors from being grown on said material.

As to claim 8, Yamada et al. disclose a second group III nitride compound semiconductor layer 2', which is amorphous or different in crystallinity from said group

III nitride compound semiconductor layers grown on said first environment division, is grown on said second environment division.

4. Claims 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada et al. (JP 7-122520).

Yamada et al. disclose in figs. 1-5 a group III nitride compound semiconductor device comprising a substrate on which a first environment division and a second environment division are formed; and a group III nitride compound semiconductor layers 2 formed on said first environment division so as to serve as effective semiconductor layers.

As to claim 6, Yamada et al. disclose a first environment division which is in a state in which a surface of said substrate is exposed before said group III nitride compound semiconductor layers are formed.

As to claim 7, Yamada et al. disclose a second environment division made of a material which prevents said group III nitride compound semiconductors from being grown on said material.

5. Claims 5-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Sverdlov US Patent No. 6,266,355.

Sverdlov discloses in fig. 4 a group III nitride compound semiconductor device comprising a substrate 12 on which a first environment division 33 and a second environment division 32 are formed; and a group III nitride compound semiconductor layers 34 formed on said first environment division so as to serve as effective semiconductor layers.

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As to claim 6, Sverdlov discloses a first environment division which is in a state in which a surface of said substrate is exposed before said group III nitride compound semiconductor layers are formed.

As to claim 7, Sverdlov discloses a second environment division made of a material which prevents said group III nitride compound semiconductors from being grown on said material.

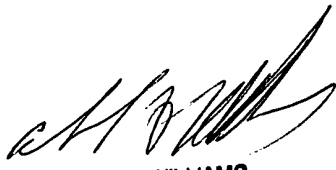
Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sunakawa et al. (JP 10-312971) disclose a GaN system semiconductor where the introduction of defects suppressed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (703) 605-1227.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on (703) 308-6601.

ANS
June 7, 2002


ALEXANDER O. WILLIAMS
PRIMARY EXAMINER
